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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,583	04/15/2004	Joachim Schmidt	2133.034USU	8182
7590 01/11/2008 Charles N. J. Ruggiero, Esq. Ohlandt, Greeley, Ruggiero & Perle, LLP 10th Floor One Landmark Square Stamford, CT 06901-2682			EXAMINER LAFORGIA, CHRISTIAN A	
			ART UNIT 2131	PAPER NUMBER
			MAIL DATE .01/11/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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**Office Action Summary**

Application No.

10/825,583

Applicant(s)

SCHMIDT, JOACHIM

Examiner

Christian La Forgia

Art Unit

2131

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/17/07</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The amendment of 07 November 2007 has been noted and made of record.
2. Claims 1-22 have been presented for examination.

### ***Response to Arguments***

3. Applicant's arguments on page 6 and amendments, filed 07 November 2007, with respect to claim 22 have been fully considered and are persuasive. The 35 U.S.C. 112, 2<sup>nd</sup> and 35 U.S.C. 101 rejection of claim 22 has been withdrawn.
4. Applicant's arguments with respect to the prior art rejection of claims 1-22 have been considered but are moot in view of the new grounds of rejection set forth below.

### ***Information Disclosure Statement***

5. The information disclosure statement (IDS) submitted on 17 December 2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2, 4-12, and 16-21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,996,712 B1 to Perlman et al., hereinafter Perlman.

8. As per claim 1, Perlman teaches a process for the packet-oriented transmission of data under application of at least one transmission system with a parallel and/or serial network and/or bus system with at least one user connected to it, the process, comprising:

transmitting the security-relevant data (column 1, line 60 to column 2, line 10, column 3, lines 51-62, i.e. integrity checks generated from one or more data packets are transmitted in a data packet or sent as a separate packet) and redundant information (column 3, lines 4-15, column 8, lines 12-36, i.e. chaff data packets are based on actual data packets but are intended to fail the integrity checks), respectively, based on the data of a respective one packet;

wherein the security-relevant data is transmitted in at least one packet (column 1, line 60 to column 2, line 10, column 3, lines 51-62, i.e. integrity checks generated from one or more data packets are transmitted as a separate packet) and each of the respective redundant information based on the security-relevant data of the respective one packet is transmitted in a separate packet (column 3, lines 4-15, column 8, lines 12-36, i.e. multiple chaff packets are sent with the same sequence number).

9. Regarding claim 2, Perlman teaches that the redundant information is encoded (Figure 4 [block 30, i.e. the chaff processor], column 8, lines 12-29).

10. Regarding claim 4, Perlman teaches that the security-relevant data is selected from the group consisting of user data (column 5, line 64 ), check data (column 5, lines 19-25, i.e. integrity check operation include check data, such as a CRC function), and control data.

11. Regarding claim 5, Perlman teaches transmitting several packets within a predefined (superset) frame structure (column 3, lines 4-15, column 3, lines 51-60, i.e. one or more data packets, packet sequence number).

12. With regards to claim 6, Perlman teaches wherein the packets within a predefined (superset) frame structure include the security-relevant data and the redundant information that are allocated to each other (column 3, lines 4-15, column 3, lines 51-60, column 8, lines 12-36).

13. Concerning claim 7, Perlman teaches wherein the packets with the security-relevant data and the redundant information that are allocated to each other are transmitted in a parallel or serial way (Figures 2 [block 15], 4 [block 15], column 3, lines 42-60).

14. Concerning claim 8, Perlman teaches wherein the packets with the security-relevant data and the redundant information that are allocated to each other are transmitted in strings or separately (Figure 4 [block 15], column 3, lines 42-60, column 8, lines 11-36).

15. Regarding claim 9, Perlman teaches wherein the packets include an addressing block and/or an identification code for their logical allocation (column 6, lines 45-63, i.e. sequence numbers).

16. As per claims 10, Perlman teaches a device for a transmission system with at least one parallel and/or serial network and/or bus system, for the packet-oriented transmission of security-relevant data comprising:

means, arranged on the side of the sender, for the packet-oriented embedding of the security-relevant data into at least one packet (column 1, line 60 to column 2, line 10, column 3, lines 51-62, i.e. integrity checks generated from one or more data packets are transmitted in a data packet or sent as a separate packet) and for the packet-oriented embedding of each allocated redundant information respectively based on the security relevant data of a respective one packet into a separate packet (column 3, lines 4-15, column 8, lines 12-36, i.e. chaff data packets are based on actual data packets but are intended to fail the integrity checks).

17. Regarding claim 11, Perlman teaches an encoding device for the encoding of the redundant information (Figure 4 [block 30, i.e. the chaff processor], column 8, lines 12-29).

18. Regarding claim 12, Perlman teaches wherein the means for embedding are allocated means for the generation of the redundant information with the same number of bits (n) as the security-relevant data to be transmitted (column 8, lines 21-28, i.e. chaff packets are identical to data packets).

19. Regarding claim 16, Perlman teaches wherein several packets with the security-relevant data and/or the allocated redundant information are capable of being transmitted within a

predefined (superset) frame structure (column 3, lines 4-15, column 3, lines 51-60, column 8, lines 12-36).

20. Regarding claim 17, Perlman teaches means for the packet-oriented embedding and readout of addressing blocks and/or identification codes for the logical allocation of individual packets and/or their contents to each other (column 6, lines 45-63, i.e. sequence numbers).

21. Regarding claim 18, Perlman teaches means are allocated to slave devices and/or a master device (Figures 2, 4, column 3, lines 50-67).

22. As per claim 19, Perlman teaches a transmission system comprising:  
at least one parallel and/or serial network and/or bus system (Figure 1 [element 16], column 3, lines 42-49); and  
at least one device according to claim 10 (Figures 2 and 4).

23. Regarding claim 20, Perlman teaches wherein the network and/or bus system is at least one ring-, line-, star- and/or tree-shaped network and/or bus structure (Figure 1 [element 16], column 3, lines 42-49).

24. Regarding claim 21, Perlman teaches wherein the network and/or bus system is at least one selected from the group consisting of Interbus, one Ethernet, one Profibus, and one CAN (Figures 2 and 4 [block 15], column 3, lines 42-49).

***Claim Rejections - 35 USC § 103***

25. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
26. Claims 3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman.
27. Regarding claim 3, Perlman does not teach that the redundant information is a check sum (CRC) calculated over the data.
28. Perlman does teach that a check sum (CRC) is calculated over the data (column 5, lines 19-25, i.e. integrity check operation include check data, such as a CRC function).
29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the checksum from the integrity checks to the chaff packets, since it has been held that merely relocating the location of the checksum would not have modified the operation of the device. See MPEP § 2144.04; See *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).
30. Regarding claim 22, Perlman does not teach wherein the transmission system is configured for use in a field selected from the group consisting of building control technology, process industry, manufacturing industry, passenger transportation, and operation of an automation plant.
31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the transmission system in one of the fields selected from building control technology, process industry, manufacturing industry, passenger transportation, and



operation of an automation plant, since Perlman states at column 1, lines 15-25 that such a system ensures that the data was not corrupted by an interloper en route to its destination.

32. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Matsushita, hereinafter Matsushita.

33. Regarding claim 13, Perlman does not teach wherein the means for the generation and/or embedding are designed such that any possible combination of the security-oriented data of a packet unambiguously results in exactly one of the possible combinations within the packet having the respective allocated redundant information.

34. Matsushita teaches wherein the means for the generation and/or embedding are designed such that any possible combination of the security-oriented data of a packet unambiguously results in exactly one of the possible combinations within the packet having the respective allocated redundant information (Abstract, i.e. each bit information of the error correction code portion is assigned as bit information of a corresponding error correction code packet at the same bit position as the bit position of each data packet).

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the generation and/or embedding to be designed such that any possible combination of the security-oriented data of a packet unambiguously results in exactly one of the possible combinations within the packet having the respective allocated redundant information, since Matsushita states at column 1, lines 37-44 that it would provide an effective error correction with respect to errors in transmitted packets, while allowing the lost packet to be reproduced.

36. Regarding claim 14, Perlman does not teach means arranged on the side of the receiver for the verification of an error-free data transmission based on the security-relevant data embedded in at least one packet and the allocated redundant information, wherein each redundant information based on the security relevant data of a respective on packet is embedded in a separate packet.

37. Matsushita teaches means arranged on the side of the receiver for the verification of an error-free data transmission based on the security-relevant data embedded in at least one packet and the allocated redundant information, wherein each redundant information based on the security relevant data of a respective on packet is embedded in a separate packet (Figure 1 [blocks 21 and 22], column 5, lines 17-43).

38. It would have been obvious to one of ordinary skill in the art at the time the invention was made for receiver to verify an error-free data transmission based on the security-relevant data embedded in at least one packet and the allocated redundant information, wherein each redundant information based on the security relevant data of a respective on packet is embedded in a separate packet, since Matsushita states at column 1, lines 37-44 that it would provide an effective error correction with respect to errors in transmitted packets, while allowing the lost packet to be reproduced.

39. With regards to claim 15, Matsushita teaches wherein the means for the verification are allocated means for reading out and allocating data and allocated redundant information received in different packets (Figure 1 [blocks 21 and 22], column 2, line 46 to column 3, line 6).

***Conclusion***

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

41. The following patents are cited to further show the state of the art with respect to transmitting redundant information, such as:

United States Patent No. 7,249,185 B1 to Schaffer et al., which is cited to show the redundant transmission of voice data.

42. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

43. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (571) 272-3792. The examiner can normally be reached on Monday thru Thursday 7-5.

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45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christian LaForgia  
Patent Examiner  
Art Unit 2131

A handwritten signature in black ink, appearing to read 'CLF', written over a horizontal line.

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